Application No. 10/652,139 Paper Dated: November 17, 2008

In Reply to USPTO Correspondence of June 26, 2008 Docket No. 1880A1 (Attorney Docket No. 3152-035034)

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.

10/652,139

Confirmation No. 1169

**Applicants** 

WILLIAM TROYER et al.

Filed

8/29/2003

Title

METHOD AND SYSTEM FOR REPORTING

ON THE QUALITY OF A REPAIR PROCESS

Group Art Unit

3623

Examiner

Thomas L. Mansfield

Customer No.

28289

# **Mail Stop Appeal Brief - Patents**

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

### APPEAL BRIEF

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal electronically filed on September 16, 2008. The Notice of Appeal appeals the final rejection of claims 1, 3-13, and 15-25.

The headings used hereinafter and the subject matter set forth under each heading are in accordance with 37 C.F.R. § 41.37.

> I hereby certify that this correspondence is being electronically submitted to the United States Patent and Trademark Office on November 17, 2008.

11-17-2008 Date Bruce L. White

Typed Name of Person Signing Certificate

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I

### **REAL PARTY IN INTEREST**

The real party in interest in this Appeal is PPG Industries Ohio, Inc., having acquired rights by way of an Assignment recorded in the United States Patent and Trademark Office at Reel 014463, Frame 0732, on August 29, 2003.

I

### RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known to the Appellants, the Appellants' legal representative, or the Assignee of the above-identified application which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

### STATUS OF CLAIMS

Claims 1, 3-13, and 15-25 are rejected and appealed.

IV

### STATUS OF AMENDMENTS

No Amendment has been filed in response to the June 26, 2008 final Office Action.

V

# SUMMARY OF CLAIMED SUBJECT MATTER

In one embodiment of the invention, as set forth in claim 1, Appellants have developed a method of reporting on the quality of repair work performed on an article comprising (a) identifying occurrences of quality problems in repair of an article at a repair facility ([paragraph 0006]); (b) creating repair checkpoints in a repair facility (paragraph [0020]); (c) generating estimate data on the estimated cost for repairing the article, the estimate data being transferred to the database, said

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estimate data includes a repair estimate factor (paragraph [0008]); (d) generating quality data on the occurrences of quality problems of step (a) at each repair checkpoint in a repair facility for an article (paragraph [0020]); (e) electronically transferring the quality data to a computer database (paragraph [0006]); (f) sorting the quality data in the database utilizing said repair estimate factor for producing a report of said quality data which relates to industry indicators; and (g) producing a report (paragraph [0008]).

In another embodiment of the invention, as set forth in claim 13, Appellants have developed a system for reporting on the quality of repair work performed on an article comprising (a) means for collecting quality data on occurrences of quality problems in repair of an article at a checkpoint of a repair facility; (b) a computer having a database for tabulating the collected quality data (paragraph [0015]); and (c) software for sorting the tabulated quality data based on estimated repair factors for repair work needed at the checkpoint and producing a report of the sorted quality data (paragraph [0036]).

VI

## **GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- I. Whether claims 1, 3, 4, 7-13, 15, 16, and 18-25 are patentable under 35 U.S.C. § 102(b) over United States Publication No. 2002/0072808 to Li (hereinafter "the Li publication").
- II. Whether claims 5, 6, and 17 are patentable under 35 U.S.C. § 103(a) over United States Publication No. 2003/0182181 to Kirkwood et al. (hereinafter "the Kirkwood publication").

VII

# **ARGUMENT**

Each issue presented for review is addressed hereinafter under the appropriate heading:

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# I. Rejection of claims 1, 3, 4, 7-13, 15, 16, and 18-25 under 35 U.S.C. § 102(b)

Claims 1, 3, 4, 7-13, 15, 16, and 18-25 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Publication No. 2002/0072808 to Li. Appellants traverse the rejection for the following reasons.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co.* of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The prior art reference-in order to anticipate under 35 U.S.C. § 102-must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements "arranged as in the claim." *Connell v. Sears, Roebuck & Co.,* 722 F.2d 1542, 1548 (Fed. Cir. 1983). Unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102. *Net Moneyin, Inc. v. Verisign, Inc.*, 2007-1565 (Fed. Cir. 2008). As detailed below, the Li publication fails to teach all the claimed elements as well as interrelation therebetween.

### A. Claims 1, 3, 4, 7-12

Claim 1 is directed to a method of reporting on quality of repair work performed on an article. More specifically, the method includes identifying occurrences of quality problems, creating repair checkpoints in a repair facility, generating estimate data which includes a repair estimate factor, generating quality data based on the occurrences of quality problems, and sorting the generated quality data using a repair estimate factor from the estimate data to produce a report. This report allows repair facilities to monitor the quality of work in a formalized manner and compare the frequency of quality problems occurring within one facility to any other facility using the present invention. Quality problems which can arise during repair, such as incorrect estimates, failures to procure the repair parts, procurement

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of incorrect repair parts, repair parts unavailable at time of repair, improper welding, poor fit of parts, improper corrosion protection, poor workmanship, incomplete repair, insufficient vehicle protection, and improper finished color match can be readily compared with occurrences from other repair facilities in order to optimize efficiency. The quality data is collected along a repair route at check points throughout the repair facility, such as a delivery stage, a disassembly stage, a find and repair stage, a metal repair stage, a mechanical repair stage, and a preparation for finishing stage. The quality data is sorted by an estimate factor from the estimate data, such as a vehicle manufacturer, a vehicle model, a vehicle year, an insurance company, an estimated repair cost, an estimated repair time, an actual repair time, labor costs, parts costs, material costs, total repair costs, facility overhead costs, and level of repair thereby ensuring the sorted quality data is relevant to industry indicators for identifying problem areas in a repair facility by benchmarking against others.

The Li publication discloses a warranty and repair system which includes a number of modules to help a repair shop service and diagnose a vehicle problem. The system of the Li publication is focused on providing service and diagnosis of customer vehicle problems and includes a dialog module (32), a case based reasoning module (30), a repair processing module (40), a user skill determinator module (50), a vehicle quality feedback module (60), a severity module (70), and a repair monitoring system (62). The repair monitoring system (62) monitors the evaluation of the repair process. The dialogue module (32) collects service information regarding a vehicle from a user. The case-based reasoning module (30) provides service information to form a pre-diagnosis that indicates the maintenance required to service a vehicle and can also indicate detailed service procedures to follow. The repair processing module (40) manages warranty-specific information. The vehicle quality feedback module (60) includes a known issues database and equipment configuration information for monitoring servicing issues based on diagnosis, service information, and Vehicle Identification Numbers (VIN). If the same vehicle of a particular customer has been in and out of the repair shop repeatedly for the same problem, the system can identify that using the VIN. The

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repair monitoring system (62) monitors the evaluation of the repair process and provides reporting on process steps using qualitative scores based on how well a step was performed; for example, providing a high score to a well-performed step and a low score to a poorly performed step.

(i) At least elements (a), (c), (d), (f), and (g) are lacking in the Li publication.

In the final Office Action dated June 26, 2008, the Examiner asserts that the Li publication teaches each and every element of independent claim 1 of the present invention. Appellants contend that the Li publication fails to disclose steps (a), (c), (d), and (f). In addition, Appellants further contend that the Li publication fails to teach or suggest the arrangement or combination provided by the steps of the present invention.

With regard to Step (a) of claim 1, identifying occurrences of quality problems in repair of an article at a repair facility, the Examiner has cited paragraphs [0049-0050] in the Li publication which discuss a known issues database (95), containing repair issues related directly to a vehicle. These issues are not focused to a repair facility. The Examiner asserts that difficult repair issues are an example of occurrences of quality problems. The Appellants contend that this assertion is not valid because difficult repair issues is a general description of what is already known, namely, that there are problems at the step, but it does not disclose identifying discretely defined problems as is required by the claim language in step (a) of the present invention which can occur in a repair facility and cause problems in the operations. Furthermore, the Li publication teaches away from identifying occurrences, because the Li publication is only concerned with quality of the workers job, not the overall efficiency of the repair facility as in the present invention so there would be no need to track occurrences of problems such as those in the present invention. Accordingly, the Li publication does not teach identifying specific occurrences.

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With regard to step (c) of the present invention, the Examiner asserts that the Li publication discloses generating estimate data on the estimated costs for repairing the article, the estimate data being transferred to the database. In the final Office Action, paragraph [0064] of the Li publication is cited as showing that the estimate is provided in a dialog manager screen (see FIG. 24), however, there is no disclosure in the Li publication as to storage of the data in a database with quality data. In fact, FIGS. 3-6 of Li show nine different databases, none of which show estimate data being stored therein. Each module of the Li publication functions separately, so there would be no reason to store estimate data with quality data. Therefore, step (c) is not taught by the Li publication.

With regard to step (d), the Li publication provides qualitative ratings of steps performed. More specifically, the repair monitoring system of the Li publication discloses an evaluation process for giving a score to a step. The Li publication states that the score can be used to determine specifically which technicians are causing problems in the system (see Li, paragraph [0039], lines 8-9). However, in the present invention, quality data is recorded regarding occurrences identified in step (a). This quality data is different from the scores in the Li publication for several reasons. First, using quality data regarding occurrences facilitates identification of an exact reason for a failure at a repair checkpoint. Second, using a baseline of identified occurrences creates a standard and facilitates comparing a repair facility against the database of repair facilities. With the Li publication, the only information captured is how well a technician performs at a certain step. Therefore, step (d) is not taught by the Li publication.

With regards to step (f) of the present invention, the Li publication fails to disclose utilizing a repair estimate factor to sort quality data. To the extent that the Li publication records scores for technicians on tasks in a repair shop, the scores are not sorted based on a repair estimate factor. As noted above, the full extent of the Li publication in regard to reports is a general teaching to use a monitoring system to provide reports to determine which technicians may be better suited for a certain task (see Li, paragraph 39, lines 6-9).

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Further, the Examiner cites paragraph [0040] as teaching the sorting step (f). However, that passage only explains how information on a vehicle can be used to perform a "pre-diagnosis." That pre-diagnosis is not utilized to sort repair quality data generated by the repair monitoring module. Its function is to determine the potential problems with the vehicle based on the symptoms input into the module by either the customer or the service associate (see paragraphs [0054-0058] and [0061]). The pre-diagnosis is never even communicated to the repair servicing module and, therefore, it cannot be used to sort the quality data contained therein. At best, the pre-diagnosis step sorts the symptoms input by the user to report a preliminary list of the necessary repairs.

Another important distinction that can be made between the Li publication and the present invention is that the Li publication is focused on customer service while the present invention is focused on improving the repair facility. For example, the Li publication discusses a system having a dialog manager for collection of service data from a customer, a case-based reasoning system for analyzing the customer-input service information, and a repair processing module for administering the customer's warranty service. In the present invention, the data sorting produces quality data reports for a repair facility to determine important information about the operations. For example, the data is sorted in one scenario by a repair estimate factor of repair time which can demonstrate to an insurance company that a repair facility is working at a rate comparable to that of an industry standard in a geographic area of interest. In addition, sorting using a repair estimate factor of a model type allows a vehicle manufacturer to identify certain models that have higher occurrences of quality problems consistently during repair. The Li publication does not indicate any module to provide the sorting of the quality data and does not disclose repair estimate factors and still further does not provide reports relating to industry indicators, therefore, step (f) is not taught by the Li publication.

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Step (g) of the present invention utilizes the sorted quality data to produce a report and, therefore, is not taught by the Li publication for the same reasons as for step (f).

Finally, the Li publication fails to disclose the elements arranged as in the present invention.

# (ii) The Li publication fails to disclose a single combination of steps

In the Li publication, there is no single arrangement that discloses all of the elements of claim 1 of the present invention. The Examiner combines elements from at least three separate subsystems of the Li application as illustrated in the following table.

Li Subsystem	Function
vehicle quality feedback module (60)	indicate repetitive problems with a make/model of vehicle
repair monitoring system (62)	collects evaluation scores on repair steps
case based reasoning module (30)	diagnose vehicle's problems

The Li publication fails to disclose any arrangement or combination of the steps performed by the various subsystems as a system the same as the present invention. The subsystems taught in the Li publication are independent of one another and the results of steps performed in one subsystem are not available for use by the other subsystems. The results from a step performed in one subsystem (e.g., the repair monitoring system) are not available for use in a later step (e.g., the case based reasoning module) as required by the present invention. In contrast, the present invention requires the results of each step used by each other step. Therefore, since no arrangement or combination exists in the Li publication that discloses the arrangement of the method of claim 1 of the present invention, claim 1 is not anticipated.

Accordingly, for the reasons stated hereinabove, Appellants respectfully request reconsideration of claim 1.

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Claims 3, 4, 7-12 depend directly or indirectly from claim 1 and are therefore allowable for the reasons stated hereinabove with regard to claim 1.

# B. Claim 13, 15, 16, and 18-25

Claim 13 is directed to a system of reporting on quality of repair work performed on an article. More specifically, the system includes means for collecting quality data based on the occurrences of quality problems and software for sorting the generated quality data using a repair estimate factor from the estimate data.

In the final Office Action dated June 26, 2008, the Examiner asserts that the Li publication teaches each and every element of independent claim 13 of the present invention. However, elements (a), (b), and (c) are absent from the Li publication and the Li publication fails to teach the novel arrangement of the present invention.

With regard to element (a), the means for collecting occurrences of quality problems in repair of an article at a repair facility, the Li publication describes a vehicle quality feedback module (60) that assesses whether a vehicle includes components known to be problematic based on information in the "known issues" database (95), which contains repair issues related directly to a vehicle. However, these issues are not relevant to a repair facility. The Li system identifies difficult repair issues as a general description of problems with certain vehicles. The Li system cannot identify occurrences of quality problems at a certain step of a repair process as required by the claim 13.

With further regard to element (a), the repair monitoring system of the Li publication discloses an evaluation process for giving a score to a step. The Li publication further states that the score can be used to determine specifically which technicians are causing problems in the system (see the Li publication, paragraph [0039], lines 8-9). However, in the present invention, quality data is recorded regarding the identified occurrences of step (a). This quality data is distinguished from the scores in the Li publication for several reasons. First, using quality data regarding occurrences facilitates identification of exact reasons for a failure at a

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repair checkpoint. Second, using a baseline of identified occurrences facilitates comparing a repair facility against the database of repair facilities to determine if there is an abnormal amount of occurrences. However, the scoring system of the Li publication only identifies a problem with a particular technician performing a step. Thus, there is no means for collecting quality data in the Li publication as recited in element (a).

Regarding element (b) of claim 13, the Examiner has stated that the Li publication discloses generating quality data at repair check points and sorting that quality data using a repair estimate factor. As noted above, the Li system has no device that collects quality data on repair quality of checkpoints. Thus, the Li publication lacks a database of such data in a computer. In fact, FIGS. 3-6 of the Li publication show nine different databases, none of which show repair quality data taught by the Li publication.

With regard to element (c), the Li publication fails to disclose software to sort quality data based on repair estimate factors. To the extent that the repair monitoring system (62) of Li records scores for technicians on tasks in a repair shop, the scores are not sorted based on a repair estimate factor. At best, the Li publication includes general disclosure on a system for providing reports to determine which technicians may be better suited for a certain task (see the Li publication, paragraph [0039], lines 6-9).

Further, the Examiner cites paragraph [0040] as teaching the sorting step. However, this only explains how information on a vehicle can be used to perform a "pre-diagnosis." A pre-diagnosis is not utilized to sort repair quality data generated by the repair monitoring system. Its function is to determine the potential problems with the vehicle based on the symptoms input into the module, by either the customer or the service associate (see paragraphs [0054-0058] and [0061]). The pre-diagnosis is never even communicated to the repair servicing system and, therefore, there is no system to sort the quality data contained therein.

Accordingly, for the reasons stated hereinabove, Appellants respectfully request reconsideration of claim 13.

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Claims 15, 16, and 18-25 depend directly or indirectly from claim 13 and are therefore allowable for the same reasons.

## II. Rejection of claims 5, 6, and 17 under 35 U.S.C. § 103(a)

Claims 5, 6, and 17 stand rejected under 35 U.S.C. § 103(a) for obviousness over United States Publication NO. 2003/0182181 to Kirkwood et al. Appellants traverse the rejection for the following reasons.

The Kirkwood publication discloses a method of performance analysis for a business entity using an online computer system. More specifically, the method includes a client linked to a server computer, whereby the method includes input of performance data and comparing key performance indicators based on the performance data.

### A. Claims 5, 6 and 17

Claim 5 depends from claim 4 and further defines quality data to include information on the date of the repair and the report identifying the quantity of quality problems in a specified time period.

Claim 6 depends from claim 4 and defines quality data report to compare the quantity of repairs having at least one occurrence of a quality problem in a time period to the total quantity of repairs performed in the time period.

Claim 17 depends from claim 16 and further includes information on the date of the repair and the software includes an algorithm for sorting the quality data for repairs having at least one occurrence of a quality problem in a time period.

To establish a *prima facie* case of obviousness, an Examiner has the burden of identifying objective teachings in the prior art, or knowledge generally available to one of ordinary skill in the art, which would lead an individual to combine the relevant teachings of the references in the manner suggested by the Examiner. *In re Fritch*, 23 U.S.P.Q.2d at 1783; *In re Fine*, 5 U.S. P.Q.2d at 1598. Some articulated reason with rational underpinning to support the legal conclusion of obviousness must be provided for the Examiner to meet that burden. MPEP §2143.01, citing *KSR International v. Teleflex Inc.*, 82 U.S.P.Q.2d 1385, 1396 (U.S.

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2007) quoting In re Kahn, 441 F.3d 977, 986, 988, 78 U.S.P.Q.2d 1329, 1335, 1336 (Fed. Cir. 2006). This reason cannot be based on hindsight. MPEP (Rev. Sept. 6, 2007) §2145. Examples of rationales to support a *prima facie* showing of obviousness are provided in MPEP §2143:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods or products) in the same way;
- (D) Applying a known technique to a known device (method or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; and
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teaching to arrive at the claimed invention.

With regard to claim 5, the Examiner has argued that the benefit of customizing and fine-tuning benchmarking provides the motivation to combine the Li publication and the Kirkwood publication. Appellants submit that the combination is impermissible since the unique advantage that the Examiner has cited is the unique end results of Appellants' invention, and the Examiner has therefore used improper hindsight to form the motivation to combine.

Assuming arguendo that such a combination is properly motivated in the prior art, the combination of references still fails to teach or suggest a system that reports the occurrences of quality problems over a given time period. As discussed previously hereinabove with reference to claim 1, the Li publication does not teach or suggest a method or system for using quality data as claims 1 and 13, but rather, it only discloses a scoring system. Additionally, the Kirkwood publication fails to cure this deficiency since it only teaches historical data without mentioning

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occurrences of quality data. Absent from the combination of these teachings is any disclosure or motivation to monitor repair facilities, the quality data along with the time period, and/or number of occurrences of quality problems. Therefore, claims 5,6, and 17 define over the combined teachings of Li and Kirkwood.

### **CONCLUSION**

For the reasons set forth above, claims 1, 3-13, and 15-25 are patentable over the cited art and are in condition for allowance. Reversal of all of the Examiner's rejections and allowance of these claims are respectfully requested.

The Commissioner of Patents and Trademarks is hereby authorized to charge the fee of \$540.00 by credit card, which information accompanies this Appeal Brief. The Commissioner of Patents and Trademarks is hereby authorized to charge any additional fees which may be required to Deposit Account Number 23-0650. Please refund any overpayments to Deposit Account Number 23-0650.

Respectfully submitted,

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#### **CLAIM APPENDIX**

- 1. A method of reporting on the quality of repair work performed on an article comprising the steps of:
- (a) identifying occurrences of quality problems in repair of an article at a repair facility;
  - (b) creating repair checkpoints in a repair facility;
- (c) generating estimate data on the estimated cost for repairing the article, the estimate data being transferred to the database, said estimate data includes a repair estimate factor;
- (d) generating quality data on the occurrences of quality problems of step (a) at each repair checkpoint in a repair facility for an article;
- (e) electronically transferring the quality data to a computer database;
- (f) sorting the quality data in the database utilizing said repair estimate factor for producing a report of said quality data which relates to industry indicators; and
  - (g) producing a report of the sorted quality data.
  - 3. The method of claim 1, wherein the article is a vehicle.
- 4. The method of claim 3, wherein the quality problems are selected from the group consisting of incorrect estimate, failure to procure repair parts, procurement of incorrect repair parts, repair parts unavailable, improper welding, poor fit of parts, improper corrosion protection, poor workmanship, incomplete repair, insufficient vehicle protection and improper refinish color match.
- 5. The method of claim 4, wherein the quality data includes information on the date of the repair and the report of step (e) identifies the quantity of quality problems in a time period.

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- 6. The method of claim 4, wherein the report of step (e) compares the quantity of repairs having at least one occurrence of a quality problem in a time period to the total quantity of repairs performed in the time period.
- 7. The method of claim 4, wherein the checkpoint comprises delivery of the vehicle to the repair facility, disassembly of the vehicle, frame repair, metal repair, mechanical repair, preparation for refinishing, application of refinish, reassembly of the vehicle and delivery of the vehicle to its owner.
- 8. The method of claim 7, wherein sorting comprises reporting the quality data according to one of the repair checkpoints.
- 9. The method of claim 3, wherein said repair estimate factor comprises one of: a vehicle manufacturer, vehicle model, vehicle year, insurance company, repair time, labor cost, parts cost, materials cost, total repair cost, repair facility overhead, geographic area and repair level.
- 10. The method of claim 3, wherein said report having industry indicators comprising one of: repair shop problem, vehicle repair cost, vehicle repairability and vehicle insurance cost balance.
- 11. The method of claim 3, wherein steps (d), (e), (f) and (g) are performed on a computer network.
- 12. The method of claim 11, wherein the computer database of step (e) is maintained on a global communications network.
- 13. A system for reporting on the quality of repair work performed on an article comprising:

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- (a) means for collecting quality data on occurrences of quality problems in repair of an article at a checkpoint of a repair facility;
- (b) a computer having a database for tabulating the collected quality data; and
- (c) software for sorting the tabulated quality data based on estimated repair factors for repair work needed at the checkpoint and producing a report of the sorted quality data.
- 15. The system of claim 13, wherein the article is a vehicle and the repair facility is a vehicle repair facility.
- 16. The system of claim 15, wherein the quality problems are selected from the group consisting of incorrect estimate, failure to procure repair parts, procurement of incorrect repair parts, repair parts unavailable, improper welding, poor fit of parts, improper corrosion protection, poor workmanship, incomplete repair, insufficient vehicle protection and improper refinish color match.
- 17. The system of claim 16, wherein the quality data further comprises information on the date of the repair and the software includes an algorithm for sorting the quality data for repairs having at least one occurrence of a quality problem in a time period.
- 18. The system of claim 16, wherein the checkpoint comprises one of: delivery of the vehicle to the repair facility, disassembly of the vehicle, frame repair, metal repair, mechanical repair, preparation for refinishing, application of refinish or reassembly of the vehicle and delivery of the vehicle to its owner.
- 19. The system of claim 18, wherein the software includes an algorithm for sorting the quality data according to one of the repair stages.

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- 20. The system of claim 15, wherein the quality data includes the estimate data and the software includes an algorithm for sorting the quality data according to a repair estimate factor selected from the group consisting of vehicle manufacturer, vehicle model, vehicle year, insurance company, repair time, actual repair time, labor cost, parts cost, materials cost, total repair cost, repair facility overhead and repair level.
- 21. The system of claim 15, wherein the software includes an algorithm for sorting the data according to a geographic area of the repair facility.
- 22. The system of claim 15, wherein the means for collecting quality and estimate data comprises another computer.
- 23. The system of claim 15, wherein the computer having the database further includes the means for collecting the quality and estimate data.
- 24. The system of claim 23, wherein the computer is maintained on a global communications network.
- 25. The system of claim 13, wherein said report having industry indicators comprising repair shop problem, vehicle repair cost, vehicle repairability and/or vehicle insurance cost balance.

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# **EVIDENCE APPENDIX**

None.

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# RELATED PROCEEDING APPENDIX

None.